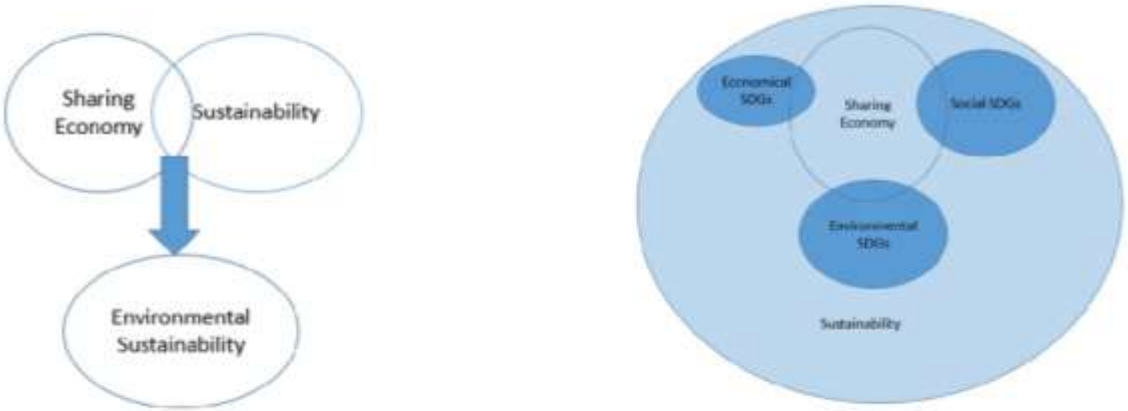
International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 14s,2025
https://theaspd.com/index.php

Environmental Sustainability an agenda for future – Mapping Sharing Economy and Sustainability through TCCM Analysis

Dr. K. K. Khambhata[1], Dr. J. D. Mistry[2], Dr. R. Khatwani[3], Ms. Shruti Jain[4]
[1]Assistant Professor – School of Business, Auro University, Bhatpore, Opp. ONGC, Surat – 394510, keren.khambhata@aurouniversity.edu.in, ORCID : 0000-0002-4348-2455
[2]Associate Professor – Department of Business and Industrial Management, jdmistry@vnsgu.ac.in, ORCID : 0000-0001-5863-440X
[3]Assistant Professor – SIBM, riteshkhatwani@sibmpune.edu.in, ORCID : 0000-0001-7044-4748
[4]Assistant Professor – Auro University, shruti.jain@aurouniversity.edu.in, ORCID: 0000-0003-4491-3090

Abstract:
Aim: *The aim of the study is to study environmental sustainability with the help of extant literature on sharing economy and sustainability.*
Methodology: *This paper uses TCCM (Theories – Context – Characteristics-Methodology) approach to conduct a systematic literature review of the various theories used within the context of sharing economy.*
Results: *The systematic literature review helped summarise the key theories and motivators for participating in sharing behaviours. Throughout the literature environmental sustainability was the hardest to implement and measure.*
Interpretation: *Many scholars have undertaken to understand sustainability through the lens of sharing economy. Though initially platforms of sharing economy originated with the idea of collaboration and idle asset utilization, they have started becoming capitalist platforms similar to traditional industries. Hence the proposed theory of Priority – Partnership circle can help rationalise the balance between economic and environmental sustainability.*
Graphical Abstract:



Keywords: *Sharing Economy, Environment, Sustainability, SDGs, TCCM*

INTRODUCTION:

The sharing economy, a rapidly growing phenomenon, has emerged as a significant player in the global economic landscape, offering innovative solutions to various societal challenges. At the core of this paradigm shift lies the notion of leveraging digital technologies to facilitate the efficient allocation and utilization of resources, ultimately contributing to the advancement of sustainable development goals. The sharing economy's interfaces with the sustainable development agenda are multifaceted, presenting a complex web of opportunities and potential synergies. (Georgiadis et al., 2019) (Plewnia, 2019) (Yu & Bai, 2017) By enabling the sharing and optimized use of resources, the sharing economy holds the potential to address resource scarcity and promote environmental sustainability, as individuals and

organizations can access and utilize goods and services without the need for individual ownership (Yu & Bai, 2017).

Moreover, the sharing economy's impact extends beyond environmental considerations, as it can also contribute to social and economic development. By providing access to affordable goods and services, the sharing economy can enhance social inclusion and improve the quality of life for underserved communities, aligning with the United Nations' Sustainable Development Goals of reducing poverty and inequality (Yu & Bai, 2017). Furthermore, the sharing economy's potential to generate employment and income opportunities, particularly for marginalized individuals, can contribute to the achievement of Goal 8: Decent Work and Economic Growth.

Through this research we aim to understand through systematic literature review the various theories, contexts, characteristics and methodologies used in sharing economy and sustainability studies.

MATERIALS AND METHODS

The TCCM model, which stands for Theory, Context, Characteristics, and Method, serves as a structured framework for conducting systematic literature reviews (SLRs) (Xiao & Watson, 2017). This model emphasizes the importance of integrating theoretical foundations with contextual factors and methodological approaches to enhance the rigor and depth of the review process. By categorizing literature based on these four dimensions, researchers can systematically analyze and synthesize existing studies, identify gaps in the literature, and propose new avenues for research (Paul & Criado, 2020). The TCCM framework encourages a comprehensive understanding of the subject matter, allowing for a more nuanced interpretation of findings and facilitating the development of theoretical contributions that are well-grounded in empirical evidence (Bhardwaj & Kalro, 2024).

This study applied the TCCM framework to identify the theories, contexts, characteristics and methodologies used by scholars through systematic literature review of existing literature.

The following section highlights the theories used in the sharing economy and sustainability research papers.

Criteria for inclusion:

Both qualitative and quantitative empirical studies will be included, provided they offer insights into the dynamics of the sharing economy in relation to sustainability.

The studies must contain information related to sharing economy, collaborative consumption, drivers, theories, motivators, platforms, sustainability, SDGs.

The articles must be published in peer – reviewed journals

Open access articles

Criteria for exclusion:

Non – English papers

Articles from other web sources like websites, blogs, newspapers, proceedings

Paid articles

The preliminary search was based on the keywords selected to obtain papers on “sharing economy”, sustainability. The primary keywords for the study were “SE” “OR” “collaborative consumption” “OR” “platform economy” “OR” “gig economy”, “SE” “AND” “sustainability” “OR” “SDG”, “SE” “AND” “sustainable development”, “SE” “AND” “sustainable consumption”. The final study comprises of 71 articles shortlisted through the second round (total count 287) based on the abstract and key-words mentioned in the paper. The total articles screened during the third round were 154, out which 68 were taken forward for analysis.

RESULTS AND DISCUSSION

The following section discusses the application of TCCM model breaking it into subsections such as Theories, Context, Characteristics and Methodologies used to understand Sharing Economy in the Sustainability Context.

Theories:

The various theories studied in extant literature are clustered into four groups viz, consumer behaviour theories, business economic theories, socio – psychological theories, technology – innovation based theories, environment sustainability based theories. They are shown in **Table 1.**

Context

Sharing economy has been studied under various inter-disciplinary approaches to understand its linkage to sustainability and in retrospect to the achievement of Sustainable development goals. Shown in **Fig – 1.**

Characteristics

Population Characteristics

Majority of the research was carried out on millennials and Gen Z belonging to 18-35 age group, as they are considered to be economically and digitally active. Following this 17% of the research has incorporated senior citizens and elderly people in their studies. From the socio – economic classification perspective, majority of the population was urbanite and belonging primarily belonging to the middle to lower socio-economic strata. Both as consumers and providers of the platform economy, most of the population chose to participate due to the economic benefits derived by sharing economy. This demographic's unique combination of characteristics makes them a significant force in shaping market trends, influencing consumer behaviour, and driving innovation in various sharing economy activities, particularly those related to technology, sustainability, and social impact.

Sharing Economy Platforms

Majority of the literature has been conducted on accommodation and transportation platforms like home-sharing, car – sharing and bike sharing. A few studies focussed on second – hand clothing, laundromat sharing, food delivery, logistics companies and others.

Variable Characteristics

There are several antecedents and consequences used in studying the influence of Sharing Economy on Sustainability in turn affecting Sustainable development Goals. The following section mentions the list of the most examined variables used in sharing economy studies pertaining to sustainability. We have clubbed them into categories like variables – independent, dependent and outcome variables as shown in **Table 2.**

Methodologies:

The table presents a breakdown of the various types of research methodologies utilized in the literature, providing insights into the predominant approaches employed by researchers. Qualitative analysis emerges as the most prevalent type, with 27 instances. This is followed by statistical research, with 17 occurrences, demonstrating the importance of quantitative data analysis techniques in drawing conclusions and testing hypotheses. Conceptual research, with 11 instances, focuses on developing new ideas, theories, or frameworks based on existing literature and theoretical constructs. Case study analysis, mixed methods, and mathematical research make up the remaining types, each offering unique perspectives and approaches to address research questions.

Challenges for Environmental Sustainability

The relationship between economic motivations and environmental actions within the framework of the Sustainable Development Goals (SDGs) highlights a critical dynamic in achieving sustainability. Economic SDGs often serve as strong motivators for individuals and businesses, driving investments and initiatives that align with financial benefits. For instance, platforms in the sharing economy can enhance economic growth by providing new income opportunities and promoting efficient resource use, thereby addressing goals related to decent work and economic growth (SDG 8). However, environmental SDGs tend to be prioritized only when there are clear economic incentives involved. Research indicates that sustainable practices, such as those promoted by sharing economy platforms, are more likely to be adopted when they also present tangible economic advantages, such as cost savings or increased profitability. This creates a scenario where environmental actions are contingent upon meeting economic criteria, potentially undermining the intrinsic value of sustainability efforts. As highlighted in various studies, the current prioritization of economic growth over ecological integrity can lead to trade-offs among SDG

targets, emphasizing the need for a more integrated approach that recognizes the interdependence of economic and environmental objectives. Effective policy measures must therefore incentivize sustainable practices not just for their economic returns but also for their long-term environmental benefits, fostering a holistic strategy that aligns both sets of goals for sustainable development.

Moreover, the relationship between cultural values, materialism, and pro-environmental attitudes varies significantly across different regions, particularly between developed and developing countries. In Western nations, where economic growth has historically allowed for a shift from materialist to post-materialist values, individuals tend to exhibit more pro-environmental attitudes. This phenomenon is often explained by the Post-Materialist Value Theory, which posits that as societies become wealthier, their citizens prioritize quality of life and environmental concerns over basic economic and physical security needs. Conversely, in developing and underdeveloped countries, where material concerns dominate due to ongoing struggles for economic stability, pro-environmental attitudes may be less pronounced. Research indicates that high materialistic values are typically associated with lower levels of pro-environmental behavior. Individuals in these contexts often prioritize immediate economic gains over long-term environmental sustainability, leading to a conflict between materialistic desires and ecological responsibility. This disparity underscores the need for tailored approaches to environmental advocacy that consider cultural values and socio-economic conditions, promoting sustainable practices that align with both economic incentives and environmental stewardship across diverse global contexts.

According to the phenomenal work of (Andreoni, 2020) and (Fuster Morell et al., 2020) in the domain of mapping Sustainable Development Goals with Sharing Economy Platforms, there are benefits as well as risks arising from sharing economy which might positively impact SDG 1 (No Poverty) by gig jobs creation and at the same time due to trade-off it might negatively affect SDG 12 (Responsible Production & Consumption) by increase in consumption due to cheaper access to resources. Case in point being Airbnb – the accommodation platform. On one hand it is creating income for home – owners, whereas on the other hand there has been an increase in travel and consumption increasing carbon footprint.

Proposed Strategy to increase Environmental Sustainability

This study through the proposed a framework for effective application of Sharing Economy towards Sustainable Development Goals 2030. It is called the P – P (Priority – Partnership) Circle.

Priority stands for the exact SDGs that the country will be focusing on based on the *Partnership* between all the platform providers and government stakeholders in that region. This study is useful to all those industry and academia stakeholders who are trying to contribute to the issue of environmental sustainability. Future research could use AI tools to quantify the sustainability score for each of the initiatives done as per the proposed framework. The theory proposed needs empirical validation for which various platform data could be studied for a better understanding of environmental impact though carbon footprint in each of their activities.

Table - 1

Clusters	Theories
Consumer Behaviour theories	TPB, TRA, TAM, MECT, CCB
Business economic theories	Transaction cost theory, Grassroots association lifecycle theory, Business model theory, Agency theory, Stakeholder theory, Capital Theory, Cost Theory, Property Rights Theory, Ostrom's Commons
Socio-psychological theories	Self-identity theory, Self-efficacy theory, Social identity theory, Norm activation model (NAM), Social comparison theory, (SCT), (S-O-R) theory,

	Social exchange theory, ecological systems theory, Hofstede's, Self Determination theory and Adaptive theory
Technology/Innovation based theories	CSCW, Abernaty and Clark's (1985) transilience map
Sustainability based theories	Value co-creation; Sustainable consumption and production theory, Theory of consumption values, Voluntary usage of resources theory, Triple Bottomline, ISO, Paradoxical tensions

Figure – 1

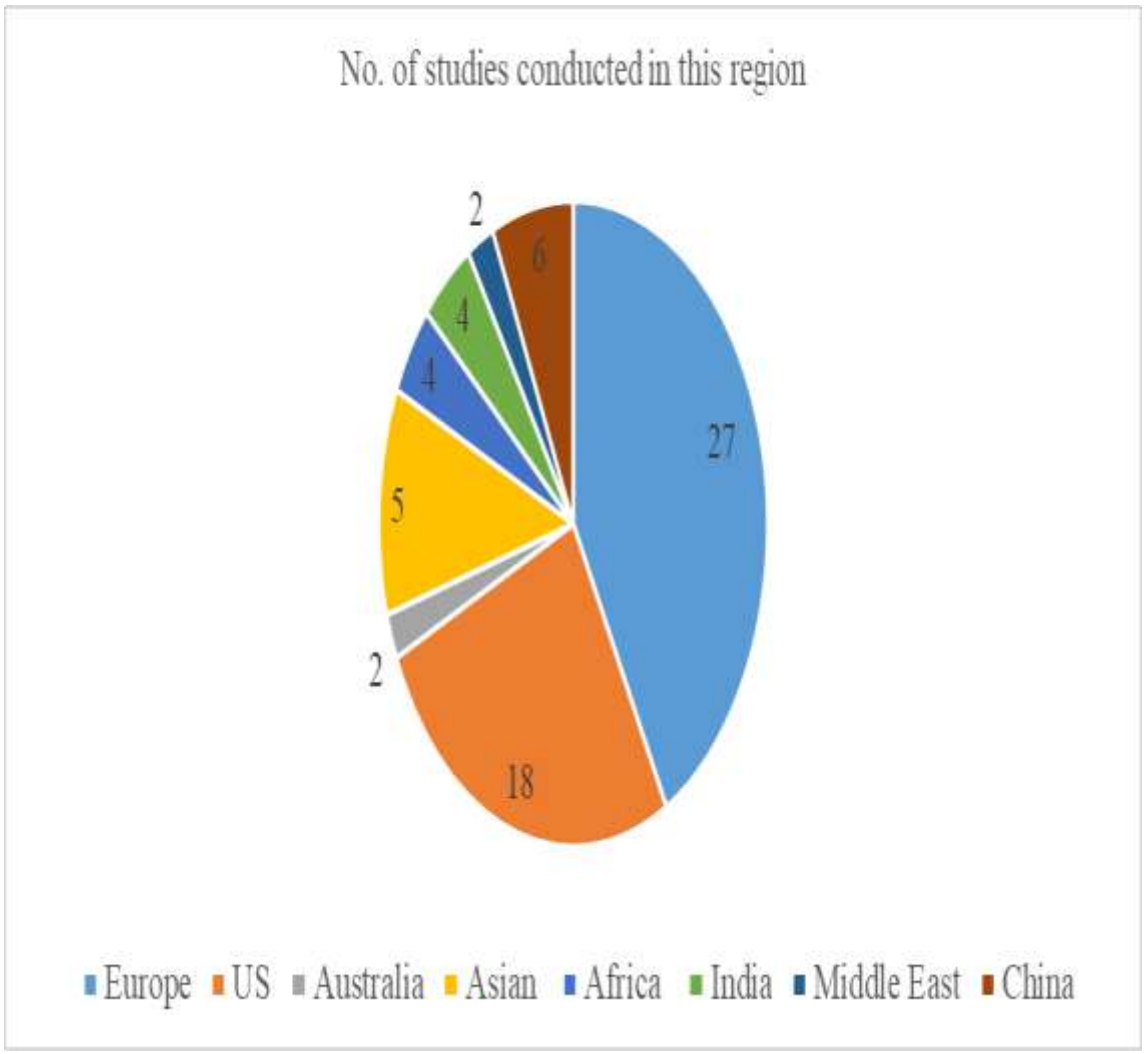


Table – 2

Independent Variables	Dependent Variables	Outcome Measured
Type of sharing/platform	Attitudes towards the economic/social/environmental benefits of the sharing economy	Sustainability
Demographic variables like age, gender, location, education level	Sustainable Development Goals (SDG)	Trust
GDP	SDG achievement (SDGA)	Customer's Intention to participate
Benefits from SE (economic, social, environmental)	Social sustainability	Sustainable consumption behaviour
Motivators - LOHAS lifestyle	Environmental benefits of sharing practices	Achievement of SDGs
Consumer attitude	Sustainable consumption behavior	
Subjective norms	Purchase intention for sustainable consumption	
Perceived behavioral control	Sustainability Index	
Corporate Social Responsibility (CSR)	Economic / Social/ Environmental impacts	
Green Management	Social capital	
Cultural Values	Trust between seller and buyer	
perceived ease of use, usefulness	Consumer decision processes	
Social Capital	Customers' intention to adopt sharing economy services/products	
Barriers to industrial sharing economy implementation	Sustainable economic development	
	Environmental sustainability	
	Barriers to sharing economy implementation in industries, such as "Lack of trust" and "Capital cost"	

Acknowledgments: We acknowledge the contribution of our institutions for granting us access to the journals for conducting SLR.

Authors' contributions – Dr. Keren Khambhata has contributed in conceptualization and literature review of the study**. Dr. Janki Mistry** has conducted the analysis of the study and **Dr. Ritesh Khatwani** has contribution towards editing of the manuscript.

Funding – This study has no sources of funding to be declared

Research content – This research content has not been published anywhere.

Ethical approval – This study has not violated any code of ethics.

Conflict of interest – This study declares that it has no conflict of interest.

Data availability – The data used is available through open access journals.

Consent to publish – The authors have signed the consent to publish this research.

REFERENCES

1. Abernathy WJ, Clark KB (1985) Innovation: mapping the winds of creative destruction. Res Policy 14:3–22

2. Bellotti V, Ambard A, Turner D, et al. (2015) A muddle of models of motivation for using peer-to-peer economy systems. In: Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 2015, pp. 1085–1094. ACM.
3. Boar, A., Bastida, R., & Marimon, F. (2020). A systematic literature review. Relationships between the sharing economy, sustainability and sustainable development goals. *Sustainability*, *12*(17), 6744.
4. Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner production*, *45*, 9-19.
5. Brachya, V., & Collins, L. (2016). The sharing economy and sustainability. *Urban Sustain*.
6. Carrigan, M., Magrizos, S., Lazell, J., & Kostopoulos, I. (2020). Fostering sustainability through technology-mediated interactions: Conviviality and reciprocity in the sharing economy. *Information technology & people*, *33*(3), 919-943.
7. Carrigan, M., Magrizos, S., Lazell, J., & Kostopoulos, I. (2020). Fostering sustainability through technology-mediated interactions: Conviviality and reciprocity in the sharing economy. *Information technology & people*, *33*(3), 919-943.
8. Ciulli, F., & Kolk, A. (2019). Incumbents and business model innovation for the sharing economy: Implications for sustainability. *Journal of cleaner production*, *214*, 995-1010.
9. Coase, R. H. (1993). The nature of the firm (1937). *WILLIANSON, OE; WINTER, SG*.
10. Dillahunt, T. R., Wang, X., Wheeler, E., Cheng, H. F., Hecht, B., & Zhu, H. (2017). The sharing economy in computing: A systematic literature review. *Proceedings of the ACM on Human-Computer Interaction*, *1*(CSCW), 1-26.
11. Doménech-Pascual, G. (2016). Sharing economy and regulatory strategies towards legal change. *European journal of risk regulation*, *7*(4), 717-727.
12. Ek Styvén, M., & Mariani, M. M. (2020). Understanding the intention to buy secondhand clothing on sharing economy platforms: The influence of sustainability, distance from the consumption system, and economic motivations. *Psychology & Marketing*, *37*(5), 724-739.
13. Ek Styvén, M., & Mariani, M. M. (2020). Understanding the intention to buy secondhand clothing on sharing economy platforms: The influence of sustainability, distance from the consumption system, and economic motivations. *Psychology & Marketing*, *37*(5), 724-739.
14. Georgiadis, L., Iosifidis, G., & Tassiulas, L. (2019). On the efficiency of sharing economy networks. *IEEE Transactions on Network science and Engineering*, *7*(3), 1094-1110.
15. Gupta, M., Esmaeilzadeh, P., Uz, I., & Tennant, V. M. (2019). The effects of national cultural values on individuals' intention to participate in peer-to-peer sharing economy. *Journal of business research*, *97*, 20-29.
16. Gupta, P., & Chauhan, S. (2021). Mapping intellectual structure and sustainability claims of sharing economy research–A literature review. *Sustainable Production and Consumption*, *25*, 347-362.
17. Gurău, C., & Ranchhod, A. (2005). International green marketing: A comparative study of British and Romanian firms. International Marketing Review. https://doi.org/10.1108/02651330510624381
18. Hamari J, Sjöklint M and Ukkonen A (2016) The sharing economy: Why people participate in collaborative consumption. Journal of the Association for Information Science and Technology 67(9): 2047–2059.
19. Hartl, B., & Hofmann, E. (2019). Sharing economy. In *A research agenda for economic psychology* (pp. 154-168). Edward Elgar Publishing.
20. Hossain, M. (2020). Sharing economy: A comprehensive literature review. *International Journal of Hospitality Management*, *87*, 102470.
21. Hu, J., Liu, Y. L., Yuen, T. W. W., Lim, M. K., & Hu, J. (2019). Do green practices really attract customers? The sharing economy from the sustainable supply chain management perspective. *Resources, Conservation and Recycling*, *149*, 177-187.
22. Jelinkova, M., Tetrevova, L., Vavra, J., & Munzarova, S. (2021). The sharing economy in the context of sustainable development and social responsibility: The example of the Czech Republic. *Sustainability*, *13*(17), 9886.
23. Leung, X. Y., Xue, L., & Wen, H. (2019). Framing the sharing economy: Toward a sustainable ecosystem. *Tourism Management*, *71*, 44-53.
24. Light, A. (2019). Designing the economics of the sharing economy: towards sustainable management. In *Handbook of the sharing economy* (pp. 105-120). Edward Elgar Publishing.
25. Light, A., & Miskelly, C. (2019). Platforms, scales and networks: Meshing a local sustainable sharing economy. *Computer Supported Cooperative Work (CSCW)*, *28*(3), 591-626.
26. Matharu, M., Jain, R., & Kamboj, S. (2020). Understanding the impact of lifestyle on sustainable consumption behavior: a sharing economy perspective. *Management of environmental quality: An international Journal*, *32*(1), 20-40.
27. Midgett, C., Bendickson, J. S., Muldoon, J., & Solomon, S. J. (2018). The sharing economy and sustainability: A case for Airbnb. *Small Business Institute Journal*, *13*(2), 51-71.
28. Moncef, B., & Monnet Dupuy, M. (2021). Last-mile logistics in the sharing economy: sustainability paradoxes. *International Journal of Physical Distribution & Logistics Management*, *51*(5), 508-527.
29. Nozari, M. A., Ghadikolaei, A. S., Govindan, K., & Akbari, V. (2021). Analysis of the sharing economy effect on sustainability in the transportation sector using fuzzy cognitive mapping. *Journal of Cleaner Production*, *311*, 127331.
30. Penz, E., Hartl, B., & Hofmann, E. (2018). Collectively building a sustainable sharing economy based on trust and regulation. *Sustainability*, *10*(10), 3754.

31. Plepys, A., & Singh, J. (2019). Evaluating the sustainability impacts of the sharing economy using input-output analysis. In *A research agenda for sustainable consumption governance* (pp. 66-84). Edward Elgar Publishing.
32. Plewnia, F. (2019). The energy system and the sharing economy: Interfaces and overlaps and what to learn from them. *Energies*, *12*(3), 339.
33. Proserpio, D., & Tellis, G. J. (2017). Baring the sharing economy: Concepts, classification, findings, and future directions. *Classification, Findings, and Future Directions (December 28, 2017)*.
34. Pu, R., Li, X., & Chen, P. (2021). Sustainable development and sharing economy: A bibliometric analysis. *Problems and Perspectives in Management*, *19*(4), 1.
35. Rechene, S. T., Silva, M. E., & Campos, S. A. (2018). Sharing economy and sustainability logic: Analyzing the use of shared bikes. *BAR-Brazilian Administration Review*, *15*, e180026.
36. Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2012). Business cases for sustainability: the role of business model innovation for corporate sustainability. *International journal of innovation and sustainable development*, *6*(2), 95-119.
37. Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. Academy of Management Review, 36(2), 381-403. https://doi.org/10.5465/AMR.2011.59330958
38. Tussyadiah, I. P. (2016). Factors of satisfaction and intention to use peer-to-peer accommodation. *International Journal of Hospitality Management*, *55*, 70-80.
39. Wang, D., Yan, L., Ruan, F., & Zeng, X. (2022). An abductive analysis of debates on the impact of the sharing economy: A systematic review in a sustainable framework. *Sustainability*, *14*(7), 3996.
40. Wang, Y. B., & Ho, C. W. (2017). No money? No problem! The value of sustainability: Social capital drives the relationship among customer identification and citizenship behavior in sharing economy. *Sustainability*, *9*(8), 1400.
41. Wilhelms, M. P., Henkel, S., & Falk, T. (2017). To earn is not enough: A means-end analysis to uncover peer-providers' participation motives in peer-to-peer carsharing. *Technological Forecasting and Social Change*, *125*, 38-47.
42. Ye, F., Li, Y., & Liu, P. (2023). Impact of energy efficiency and sharing economy on the achievement of sustainable economic development: new evidences from China. *Journal of Innovation & Knowledge*, *8*(1), 100311.
43. Yıldız, M., & Altan, M. (2023). Literature review of the sharing economy: Socio-cultural perspective. *Journal of Community & Applied Social Psychology*, *33*(5), 1112-1136.
44. Yu, Z., & Bai, H. (2017, May). Research on tax issues of shared economic business model. In *2017 International Conference on Education, Economics and Management Research (ICEEMR 2017)* (pp. 275-278). Atlantis Press.
45. Zhang, H., Leung, X. Y., & Bai, B. (2022). Destination sustainability in the sharing economy: a conceptual framework applying the capital theory approach. *Current issues in Tourism*, *25*(13), 2109-2126.
46. Zhu, X., & Liu, K. (2021). A systematic review and future directions of the sharing economy: business models, operational insights and environment-based utilities. *Journal of cleaner production*, *290*, 125209.